

ER5: Earth's Crust

These questions require reference to [this page on the class wikispace](#).

1. The most common element in the Earth's crust is

2. The second most common element in the earth's crust is

3. Together, the non-metals oxygen and silicon make up ___% of the Earth's crust

4. The most common metallic element of the Earth's crust is ___ which makes up 8.1% of the crust

5. The second most common metal of the Earth's crust is iron, which makes up ___ % of the crust.

In ores, metal is chemically bonded to a non-metal, and that changes their physical properties. These ores cannot be used until the metal has been removed from the other atoms. In the chart below, you can classify the ores by the kind of metal they contain and the kind of ore it is. These ores are classified as OXIDES if the metal is bonded with oxygen (O), SULFIDES if the metal is bonded with sulfur (S) or CARBONATES if the metal is bonded with CO_3 .

6. What kind of metal is contained in hematite?

7. What kind of ore is galena?

8. What is the name of the ore, HgS ?

9. Which of the iron ores is a carbonate?

10. What kind of metal is contained in cassiterite?

11. What kind of ore is magnesite?

12. What is the name of the ore PbO ?

13. Which ore contains the same elements as limonite?

14. What kind of ore is pyrite?

15. What kind of ore is urananite?

16. What would you call bauxite?

- ☐ aluminum oxide
- ☐ aluminum sulfide
- ☐ aluminum carbonate

17. What would you call smithsonite?

- ☐ zinc oxide
- ☐ zinc sulfide
- ☐ zinc carbonate

18. What would you call galena?

- ☐ lead oxide
- ☐ lead sulfide
- ☐ lead carbonate

19. Which of the following ores could be called iron oxide? (You may choose more than one if appropriate.)

- ☐ pyrite
- ☐ hematite
- ☐ magnetite
- ☐ siderite

☐ limonite

20. Which of the following ores could be called sulfides? (You may choose more than one if appropriate.)

☐ galena

☐ urananite

☐ zincite

☐ cinnabar

☐ cuprite